

REMARKS

Claims 1, 2, 4, 10, 16, 43, 49-54, 56-75, 91, 99 and 145 remain pending in this application. Further reconsideration of this application is requested.

The rejection of claims 1, 2, 4, 10, 43, 44, 49, 51, 52, 58, 59, 61, 62, 65, 69, 70, 72, 73, and 99 as being anticipated by Morgan et al., U.S. Patent No. 6,205,347 ("Morgan"), is respectfully traversed. In the final Office action, the Examiner states that the fiducial markers in Morgan establish a predefined relationship between the field of view of one imaging system and the field of view of the second imaging system. This statement is incorrect. The fiducial markers 100 of Morgan (Fig. 1) are disposed or mounted at known locations along the patient table top to aid in the registration of the resulting CT and nuclear images acquired by the separate PET scanner "B" and CT scanner "A." The markers thus establish a relationship between image data acquired on the PET scanner and image data acquired on the CT scanner. When the patient table is removed from one scanner and slid into the second scanner in Morgan, there is no mechanism by which the patient table or the region of the patient being imaged will be placed at precisely the same location in the field of view of the second scanner as it was previously in the first scanner. This is the reason that the fiducial markers are required. If Morgan had a predetermined relationship between fields of view of the two scanners, there would be no need for markers because each image location in one field of view could be correlated with a corresponding image location in the other field of view by virtue of the known relationship.

In any event, as suggested by the comments in the final rejection, the claims have been amended to positively set forth that no fiducial markers are used to establish the known geometric relationship. Accordingly, withdrawal of the rejection of independent claims 1 and 43 and claims dependent thereon is requested.

Independent claim 49 requires reconstructing a PET image from said acquired PET image data and using said acquired CT image data in the reconstruction of the PET image, to achieve a reconstructed PET image. Contrary to the assertion in the Office action, and as previously stated in the response filed March 19, 2007, Applicants remain unable to find any teaching in Morgan of using acquired CT image data in reconstructing a PET image in columns 8 – 10, again relied upon in the final rejection as

allegedly disclosing such teaching. Applicants again request that the Examiner provide a pinpoint citation of the precise location within columns 8-10 where Morgan discloses such feature. In the absence of such showing, this ground of rejection is unsupported and withdrawal thereof is requested.


For similar reasons, the obviousness rejection of dependent claims 53, 54, 63, 64, 68, 74, 75 and 91 as being unpatentable over Morgan; claims 16, 56 and 66 as being unpatentable over Morgan in view of Motomura et al., U.S. Patent No. 6,339,223; and the rejection of claims 50, 60 and 71 as being unpatentable over Morgan in view of DiFilippo et al., U.S. Patent No. 5,969,358, are respectfully traversed. Neither Motomura, cited for its alleged disclosure of "provid[ing] for truncation errors in fan beam based CT images," nor DiFilippo, cited for its alleged disclosure of a PET scanner wherein a patient is moved in an axial direction during scanning, make up for the deficiencies in Morgan with respect to the independent claims. As such, no addition of Motomura or DiFilippo to Morgan could result in the invention as set forth in the dependent claims.

The rejection of independent claim 145 as being unpatentable over Morgan in view of Motomura and DiFilippo also is respectfully traversed. Claim 145 requires continuously moving said patient support in an axial direction within said patient gantry during said step of acquiring PET image data, whereby normalization effects between individual detector rings of said PET scanner are eliminated. As explained in the response filed March 19, 2007, the Office action fails to make a *prima facie* case of obviousness, as the rejection does not address the continuously moving limitation or the normalization effect elimination limitation. The Office action alleges only that DiFilippo discloses moving a patient in an axial direction during scanning in order to acquire PET scan data. As such, the rejection of claim 145 is deficient as a matter of law. Consequently, withdrawal of this ground of rejection is requested.

Conclusion

In view of the foregoing, claims 1, 2, 4, 10, 16, 43, 49-54, 56-61, 65-75, 91, 99 and 145 are submitted to define patentable subject over the prior art of record, whether considered individually or in combination. Favorable reconsideration and the issuance of a Notice of Allowance are earnestly solicited.

Please charge any fee or credit any overpayment pursuant to 37 CFR 1.16 or 1.17 to Novak Druce Deposit Account No. 14-1437.

RESPECTFULLY SUBMITTED,					
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